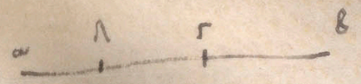

διαιρήσαι ἡ ΑΓ τὴν ΑΓ.

+ ΣΥΝΘΕΣΙΣ.

ὡς ἡ διαιρεθεῖσα ἡ ΑΓ τὴν ΑΓ. τὰ ἄρα ἀπὸ τῶν ΑΓ ἴσα ἐστὶ τῷ ἀπὸ τῆς ΑΒ καὶ τοῦ ἀπὸ τῆς ΑΓ. ἀφῃρήσθω κοινὸν τὸ ἀπὸ τῆς ΑΓ. λοιπὸν ἄρα τὸ ὑπὸ τῶν ΑΒΒΓ ἴσον ἐστὶ τῷ ἀπὸ τῆς ΑΓ. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. συνῆκται. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ. ὅπερ ἔστι τὸ ἀπὸ τῆς ΑΒ. πρότερον τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. ὅ πρόκειται δεῖξαι:

+ τὸν Ε θεωρήματος ἡ ἁνά

λυσις καὶ ἡ συνθεσις:

ὑποκείσθω γὰρ γραμμὴ ἡ ΑΒ. αἱρῶμεν καὶ μεσόμορον λόγῳ τετμήσθω κατὰ τὸν Γ. καὶ ἔστω μείζων τμῆμα τὸ ΑΓ. λόγῳ ὅτι πρότερον τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. τὰ γὰρ τετράκις τῶν ΑΒΒΓ τρὶς τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. ἀφῇρται δὲ ἀπὸ τῶν ΑΒΒΓ τὸ ἀπὸ τῶν ΑΒ ΒΓ ἴσον τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ. τὰ ἄρα ἀπὸ τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ τρὶς τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. τρὶς τετράκις ἄρα ἐστὶ τοῦ ἀπὸ τῆς ΑΓ διόλου. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ. ὅπερ συμβέβηκε. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ. ὅπερ ἐστὶ τὸ ἀπὸ τῆς ΑΒ. πρότερον τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. ὅ πρόκειται δεῖξαι:

+ τὸν Ϛ θεωρήματος ἡ ἁνά

λυσις καὶ ἡ συνθεσις:

ὑποκείσθω γὰρ ἡ ΑΒ. αἱρῶμεν καὶ μεσόμορον λόγῳ τετμήσθω κατὰ τὸν Γ. καὶ ἔστω μείζων τμῆμα τὸ ΑΓ. λόγῳ ὅτι τὸ ἀπὸ τῆς ΑΒ καὶ τὸ ἀπὸ τῆς ΑΓ τριπλάσιά ἐστι τοῦ ἀπὸ τῆς ΑΓ. ἐπεὶ γὰρ τετράκις τῶν ΑΒΒΓ τρὶς τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. ἀφῇρται δὲ ἀπὸ τῶν ΑΒΒΓ τὸ ἀπὸ τῶν ΑΒ ΒΓ ἴσον τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ. τὰ ἄρα ἀπὸ τῶν ΑΒΒΓ μετὰ τοῦ ἀπὸ τῆς ΑΓ τρὶς τετράκις ἐστὶ τοῦ ἀπὸ τῆς ΑΓ. τρὶς τετράκις ἄρα ἐστὶ τοῦ ἀπὸ τῆς ΑΓ διόλου. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ διπλάσιόν ἐστι τοῦ ἀπὸ τῆς ΑΓ. ὡς δὲ τὸ ἀπὸ τῶν ΑΒΒΓ ἴσον τῶν ΑΒΒΓ ἐστὶ τοῖς ἀπὸ τῆς ΑΓ. ἐστὶ μὲν δὲ. ἐπεὶ γὰρ ἡ ΑΒ αἱρῶμεν καὶ μεσόμορον λόγῳ τετμήσθω κατὰ τὸν Γ. καὶ ἔστω μείζων τμῆμα ἡ ἁνά ΑΓ. τὸ ἄρα ὑπὸ τῶν ΑΒΒΓ διπλάσιόν ἐστι τοῦ ἀπὸ τῆς ΑΓ. ὅπερ ἔστι τὸ ἀπὸ τῆς ΑΒ καὶ τοῦ ἀπὸ τῆς ΑΓ. ὅπερ ἔστι τὸ ἀπὸ τῆς ΑΒ καὶ τοῦ ἀπὸ τῆς ΑΓ τριπλάσιόν ἐστι